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Capture of *Philaenus spumarius* and *Cicadella viridis*

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Niels Appelman¹

¹Wageningen University

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Niels Appelman

Wageningen University

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We use this protocol and it's working

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Abstract

This protocol is used to capture spittlebugs (*Philaenus spumarius*) and Green Leafhoppers (*Cicadella viridis*)

Troubleshooting

- 1 It is recommended to familiarize yourself with the general characteristics of Spittlebugs and Green leafhoppers prior to attempting to capture the insects.
- 2 Find a terrain in your vicinity with short (under 30 cm) herblike plants. No one source can be named, as both species are extremely polyphagous.
- 3 Swipe an insect net through vegetation in one continuous motion. It is recommended to take large steps while sweeping, as insects flee areas where swiping occurs.
- 4 Tap the net at insects that are suspect of being the target insects. Insects that respond by flying are very unlikely to be spittlebugs or leafhoppers. Note that both target insects have very short antenna.
- 5 Target insects are captured with a suction exhaustor (e.g. <https://www.vermandel.com/product/entomologie-producten/vangen/insectenvallen/verzamelzuigexhauster/>)

Note: Vermandel recommends the use of white capped 20 mL tubes as temporary storage tube, but 50mL conical centrifuge tubes are preferable because they are deeper, and therefore their usage prevents insects from crashing into the bottom of the tube and being damaged.

Note: prevent the inside of the storage container from getting wet, especially in case of capture during rain, as insects can easily get caught in droplets due to surface tension and drown or be damaged.

- 6 The temporary storage tubes are inverted, and insects are allowed to climb upwards.
- 7 The temporary storage tube is held sideways while the suction exhaustor is removed and the cap is screwed onto the tube. Holding tubes sideward significantly lowers the chance of insects escaping.
- 8 Within 2 hours, move the insects from the temporary storage tubes into containers suitable for long term storage or directly into an experimental setup. This is important because these insects are ill-equipped to survive in conditions of low humidity and/or prolonged starvation.